

Work Order ID 85172

June-04-12 10:24:09 AM

\*85172\*

Page 1

Item ID: D3391-023  
Revision ID:  
Item Name: Mid Tube Assembly

Accept

\*N900040100\*

Setup Start \*NS1\*

Stop \*NS2\*

Start Date: 04/06/2012 Start Qty: 1.00 \*1\*

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00 \*1\*

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 12/06/04 Tooling:

Date:

QC: Date: SPC (Y/N):

Date:

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3391	1
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100	Skidtubes	0.00
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\*100\*

Skidtubes

Skidtubes

Memo

0.00

~~1~~-Cut tube to finish length as per Dwg D3391

~~2~~-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

~~3~~-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

~~4~~-Remove .030" from Fwd indexing Ridge as per Dwg D3391

~~5~~-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

~~6~~-Deburr

~~7~~-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

\*\*\*DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG

~~8~~-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (10 holes) as per Dwg D3391

~~9~~-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

\*\*\*DO NOT OPEN 2 MOST FWD WEARPLATE HOLES\*\*\*

CF 12-8-1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Accept

\*N900040100\*

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Cust Item ID:  
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Run Start \*NR1\*  
 Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	<del>10</del> -Open .375" holes to .438" ***do not open fwd saddle holes***								
	<del>11</del> -Locate D3391-021 in D3391-023 at 9.00" (see view z-z)								
	<del>12</del> - Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previously tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021								
	<del>13</del> - Using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.								
	<del>14</del> - Locating from two fwd wearplate holes in D3391-023 drill remaining 6 wearplate holes in D3391-021 using DT8937								
	<del>15</del> - Open 12 wearplate holes in D3391-021 to 0.297" dia.								
	<del>16</del> -Deburr and blow out all chips from inside tube, scribe batch # in D3391-023 at aft end.								

CF 12.8.2

010  
 \*110\*  
 QC  
 Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

DAS  
 16  
 9-28  
 12/08/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Mid Tube Assembly

Start Date: 04/06/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

Chemical Conversion Coat per QSI005 4.1

0.00

**\*120\***

HandFinish

Memo

0.00

Hand Finishing

1 76 12-8-7

130

QC7-Inspect Chemical Conversion Coat

0.00

**\*130\***

QC

Memo

0.00

Quality Control

1 BB 12/08/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Reference:

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Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

40  
**\*140\***

Skidtubes

Skidtubes

Skidtubes

Memo

1-Open float bag holes as per dwg  
2-C'sink float bag holes as per dwg  
3- Prepare tube for welding  
4-Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)

A/R Sikaflex exp: 13-3-14

batch#: 122130

NOTE:ENSURE WEB IS INSERTED IN AFT END OF TUBE

0.00

*OK 12/08/08*

*- DE 12/08/09*

QC5- Inspect part completeness to step on W/O

0.00

**\*150\***

QC

Quality Control

Memo

0.00

*1 8 12/08/14*



W/O:		WORK ORDER CHANGES					
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W/O:		WORK ORDER CHANGES					
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Revision ID:

Item Name: Mid Tube Assembly

Stop **\*NS2\***

Start Date: 04/06/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

185

Pressure Wash per QSI005 4.3

0.00

**\*185\***

HandFinish

Memo

0.00

Hand Finishing

AND REALODINE AS PER PAR09-043

1 128.28

190

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

**\*190\***

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

9:40  
320°F  
10:10

IX 12/09/28

200

QC3- Inspect Part Finish

0.00

**\*200\***

QC

Memo

0.00

Quality Control

W122878

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 04/06/2012 Start Qty: 1.00 \*1\*  
Required Date: 18/06/2012 Req'd Qty: 1.00 \*1\*

Cust Item ID:  
Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:  
QC: Date: SPC (Y/N): Date:

Run Start \*NR1\*  
Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

210

\*210\*

Skidtubes

Skidtubes

Skidtubes

Memo

1- insert D3391-021 into D3391-23

2- insert T-pins into first and third fwd saddle holes

3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364

4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos

5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415

6- deburr, re-alodine and blow out chips

7- press fit D3391-1 spacers using DT9416 starting from 0.500" side

220

\*220\*

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

DA 16 17/01/02

0.00

12-9-26

1 x d 12-9-26

1 x d 12-9-26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**\*85172\***

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**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Mid Tube Assembly

Start Date: 04/06/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00							
<b>*230*</b>	HandFinish	0.00							
Hand Finishing	<div>Memo</div> <div>✓ Install Inserts as per Dwg</div>								
240	QC5- Inspect part completeness to step on W/O	0.00							
<b>*240*</b>	QC	0.00							
Quality Control	<div>Memo</div>								
250	Identify as per dwg & Stock Location: <u>w10</u>	0.00							
<b>*250*</b>	Packaging	0.00							
Packaging	<div>Memo</div>								

DA's  
16  
17/6/02

0412-742-043/1387067

1x d All ul/10/02

1x d All ul/10/02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Work Order ID 85172

\*85172\*

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June-04-12 10:24:09 AM

Item ID: D3391-023

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Mid Tube Assembly

Start Date: 04/06/2012 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

260

QC21- Final Inspection - Work Order Release

0.00

\*260\*

QC

Memo

0.00

Quality Control

12/10/3

mf  
12-10-02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

June-04-12 10:24:13 AM

Page 1

Work Order ID: 85172

\*85172\*

Parent Item: D3391-023

\*D3391-023\*

Parent Item Name: Mid Tube Assembly

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A05.10.20New Issue KJ/EC  
 IPP B06.02.10ECN773 dwg rev.D EC  
 IPP C 07.03.20 rev F dwg EC  
 IPP D 07.03.28 re-format EC  
 IPP E 07.10.31 ecn 1053P EC  
 IPP Rev:F ECN 1056 07-11-13 DD verified by: EC  
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC  
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC  
 IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP  
 Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100 *D2500-1-100* Skidtube Extrusion		Manufactured	No			100	Each	82.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				HALL		82							
				50251		9							
				82373		73							
D3391-021 *D3391-021* Fwd Tube Assembly		Manufactured	No			100	Each	0.0000	1	1			
				B83637									
D3389-1 *D3389-1* Web		Manufactured	No			140	Each	10.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG		10							
				83848		4							
				83849		6							

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CF 12-8-1

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CF 12-8-2

\*\*

DC 12/08/09

W/O:		WORK ORDER CHANGES					
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**\*85172\***

Parent Item: D3391-023

**\*D3391-023\***

Parent Item Name: Mid Tube Assembly

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3681-1

Manufactured No

160

Each

87.0000

5

5

**\*D3681-1\***

Spacer

**\*\***

Location

Loc Qty

Loc Code

LG

77

80361

1

84053

76

LG001

10

68958

2

69893

2

71845

2

74874

1

76004

1

77501

2

*BE 12/08/14  
885417 \*5*

D3591-1

Manufactured No

210

Each

96.0000

2

2

**\*D3591-1\***

Bushing

**\*\***

Location

Loc Qty

Loc Code

FP

5

80377

4

82027

1

ST055

91

57350

1

83237

90

*X7*

*ul 10/02*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**\*D3391-023\***

Parent Item Name: Mid Tube Assembly

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

230

Each

2,457.000

20

20

**\*AI S4-1032-130\***

**\*\***

*Handwritten signature and date 11/10/12*

Insert

Location

Loc Qty

Loc Code

ST280

205

18122475

220

119084

116

120671

89

ST281

74

120807

36

120837

38

ST282

2178

121269

2178

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

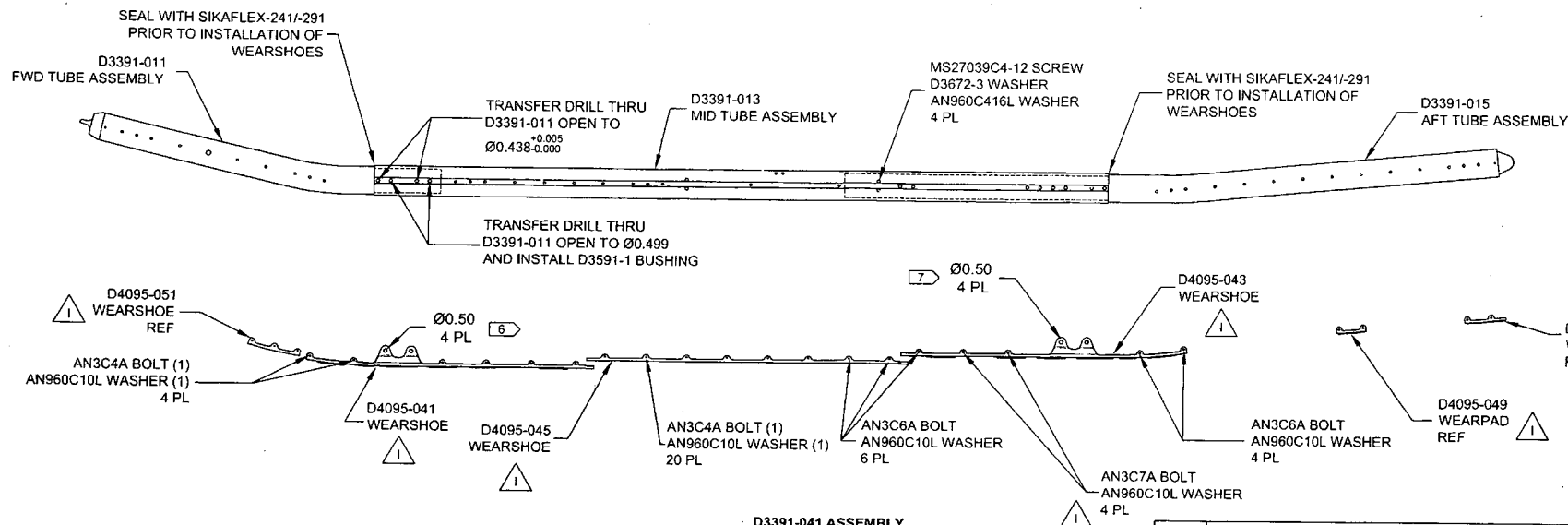
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





# **D3391-041 ASSEMBLY**

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WORK ORDER  
NO. 85172 MLJ  
12/06/04

RELEASED  
2011-11-04  
ECN#11-662

## **D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARSHOE
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

## **GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"  
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES  
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT  
WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH  
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND  
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH  
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND  
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

REV.	DESCRIPTION	BY	DATE
I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A8-4, ZN B6-8, LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8, REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
DESIGN	PH	<b>DART AEROSPACE USA, INC</b> KENT, WA DRAWING NO. D3391 TITLE 412 FLOAT SKIDTUBE REV. I SHEET 1 OF 8 SCALE NTS COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	
DRAWN	XDF		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	11.10.13		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

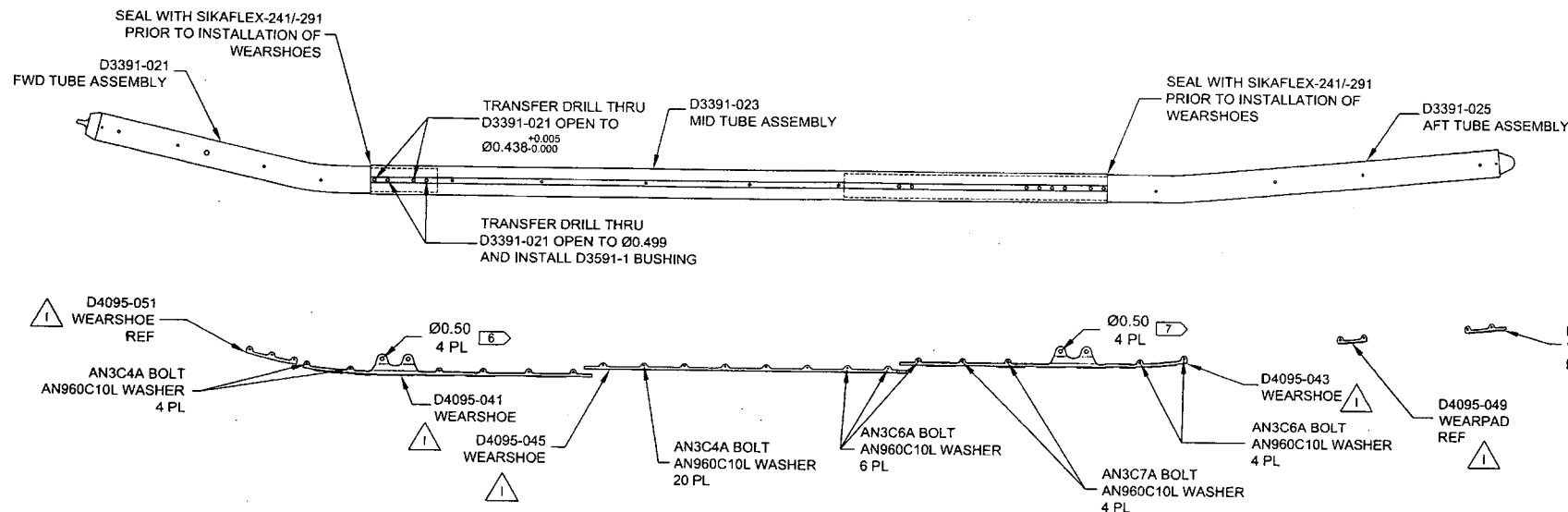
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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**D3391-043 ASSEMBLY**

**D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

QTY	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER

**GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"
- 3) AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 7) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 8) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

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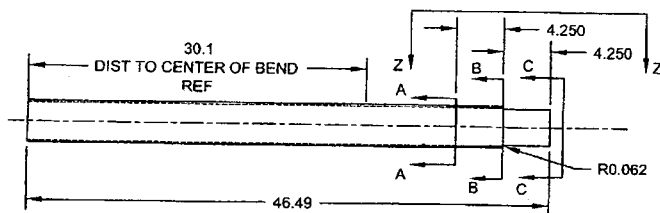
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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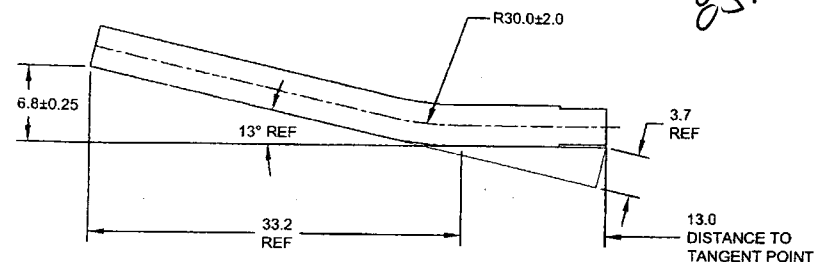
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

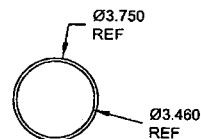
**NOTE:** Date & initial all entries



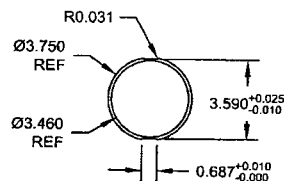
**D3391-1 CUTTING DETAIL**  
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



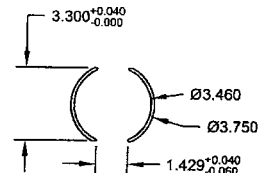
**D3391-011/-021 BENDING DETAIL**  
(MAKE FROM D3391-1)



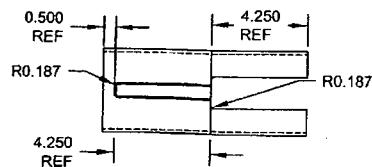
**SECTION A-A**  
SCALE 2X



**SECTION B-B**  
SCALE 2X



**SECTION C-C**  
SCALE 2X



**VIEW Z-Z**  
SCALE 2X

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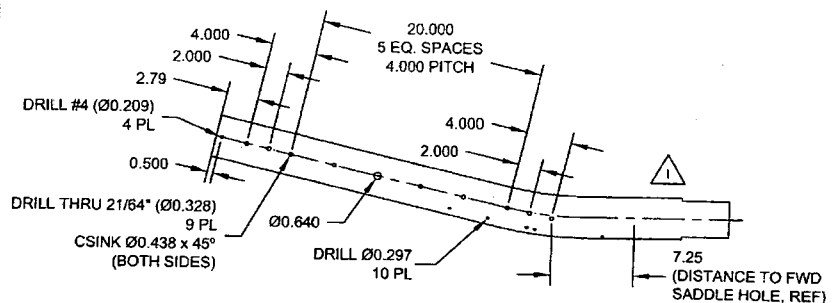
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

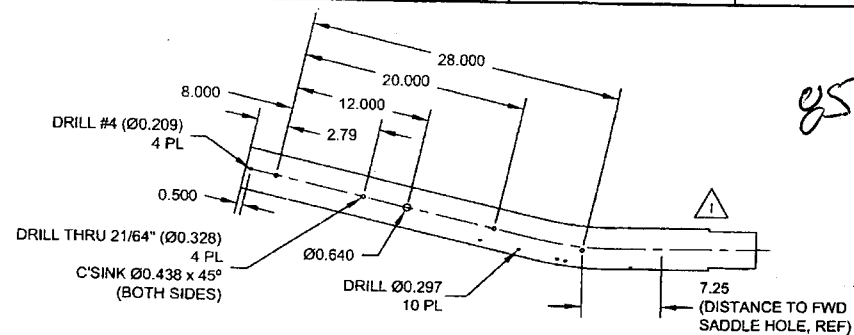
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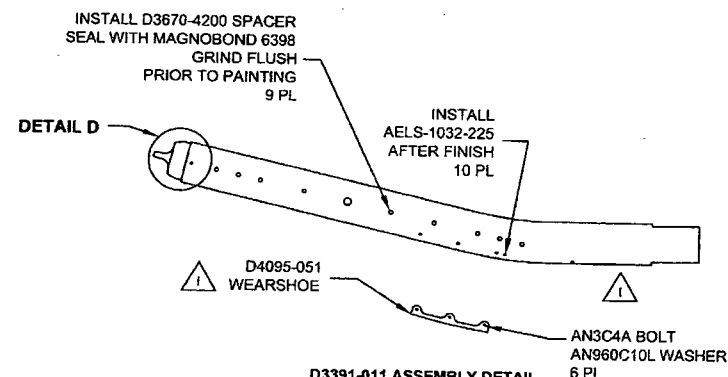
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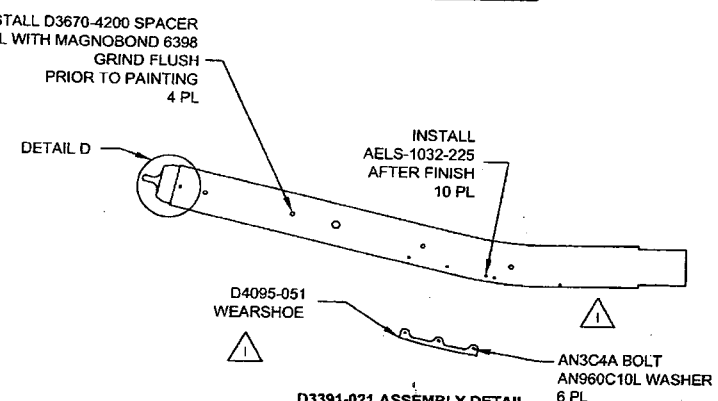
**D3391-011 DRILLING DETAIL**



**D3391-021 DRILLING DETAIL**



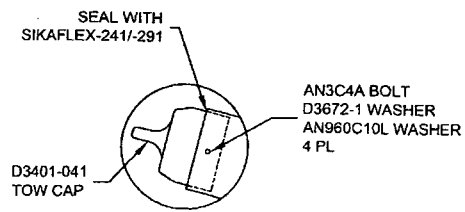
**D3391-011 ASSEMBLY DETAIL**



**D3391-021 ASSEMBLY DETAIL**

**D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST**

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D3401-041	TOW CAP
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
1	1	D4095-051	WEARSHOE
1	1	D6013-047	FWD TUBE
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
10	10	AELS-1032-225	INSERT



**DETAIL D  
SCALE 2X**

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

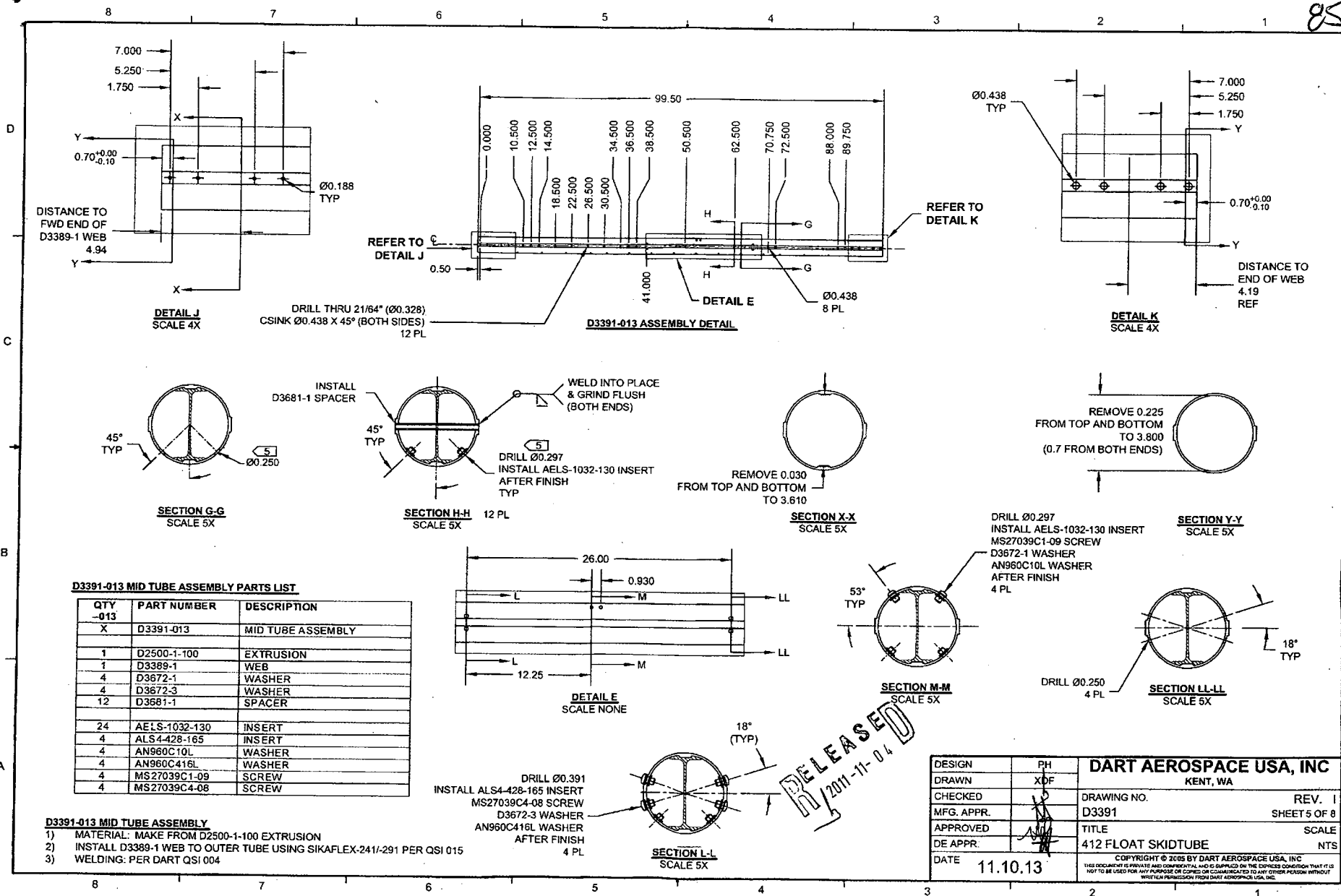
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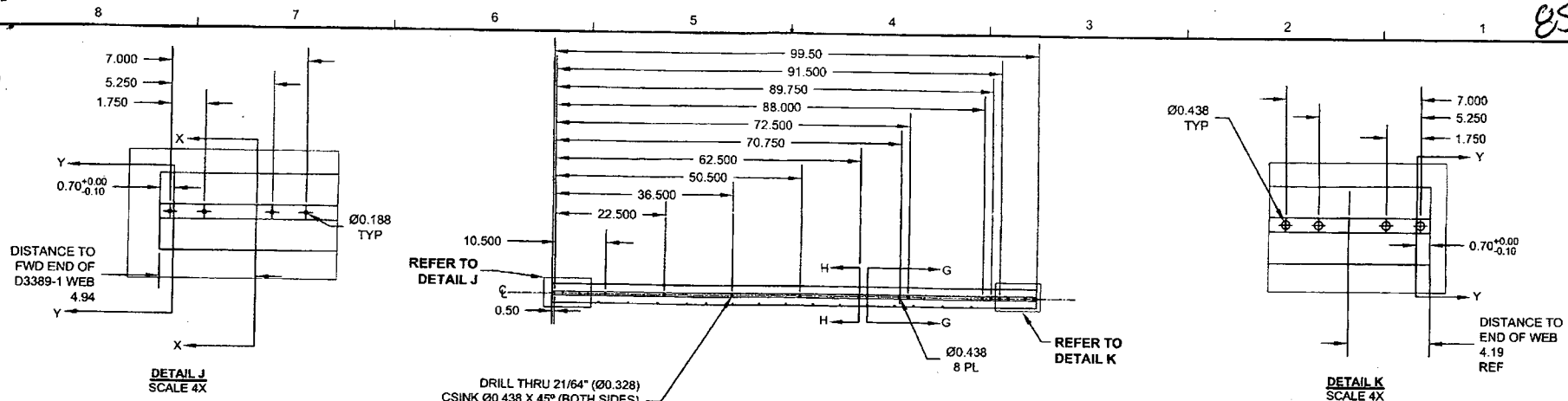
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

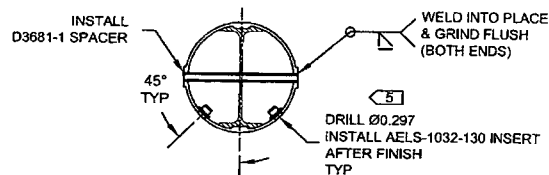
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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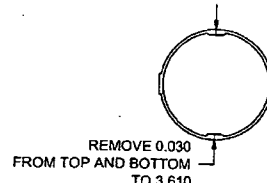
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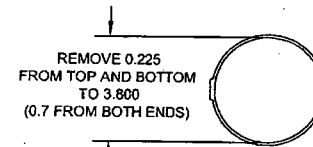
SECTION G-G  
SCALE 5X



SECTION H-H  
SCALE 5X



SECTION X-X  
SCALE 5X



SECTION Y-Y  
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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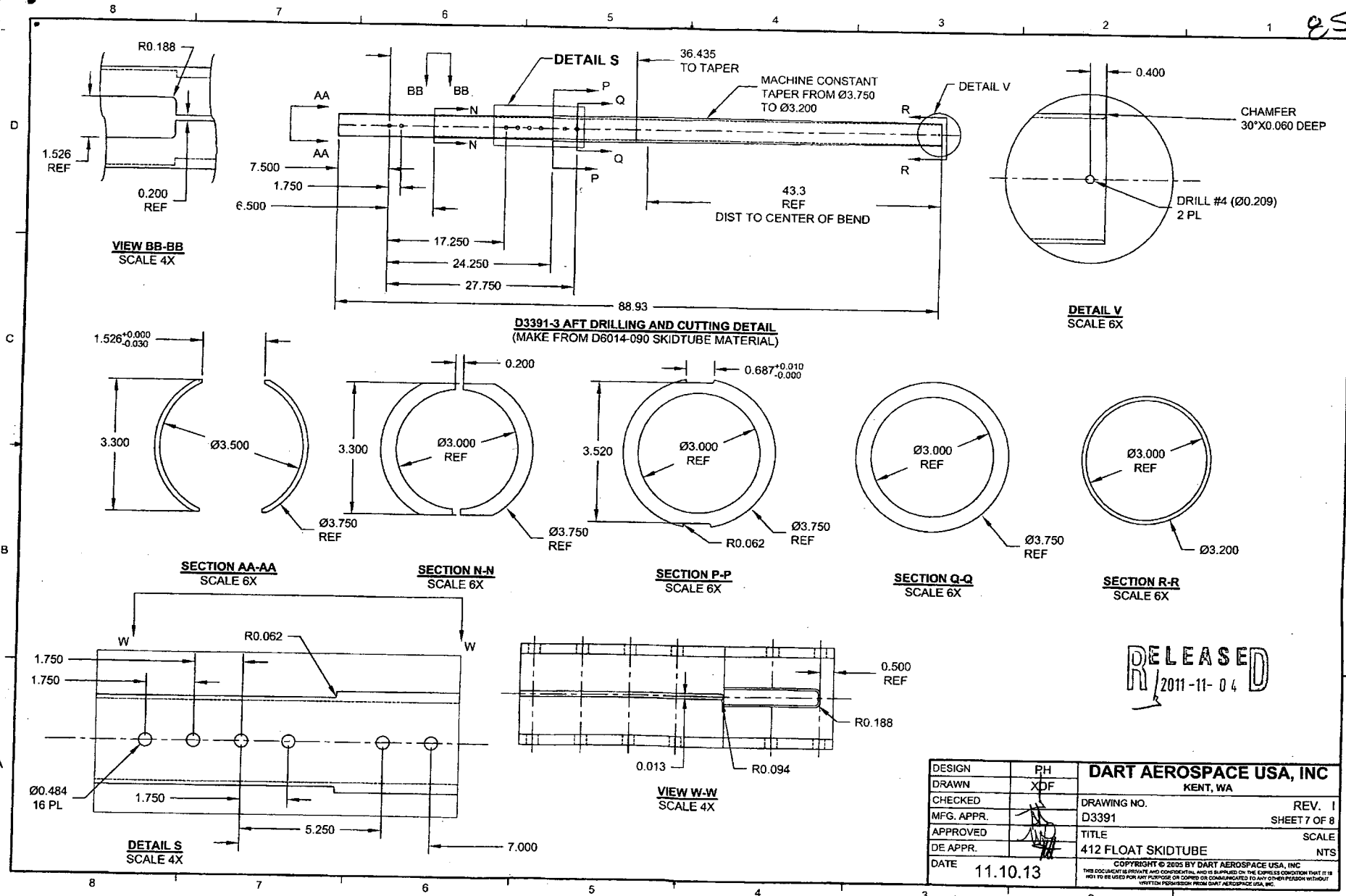
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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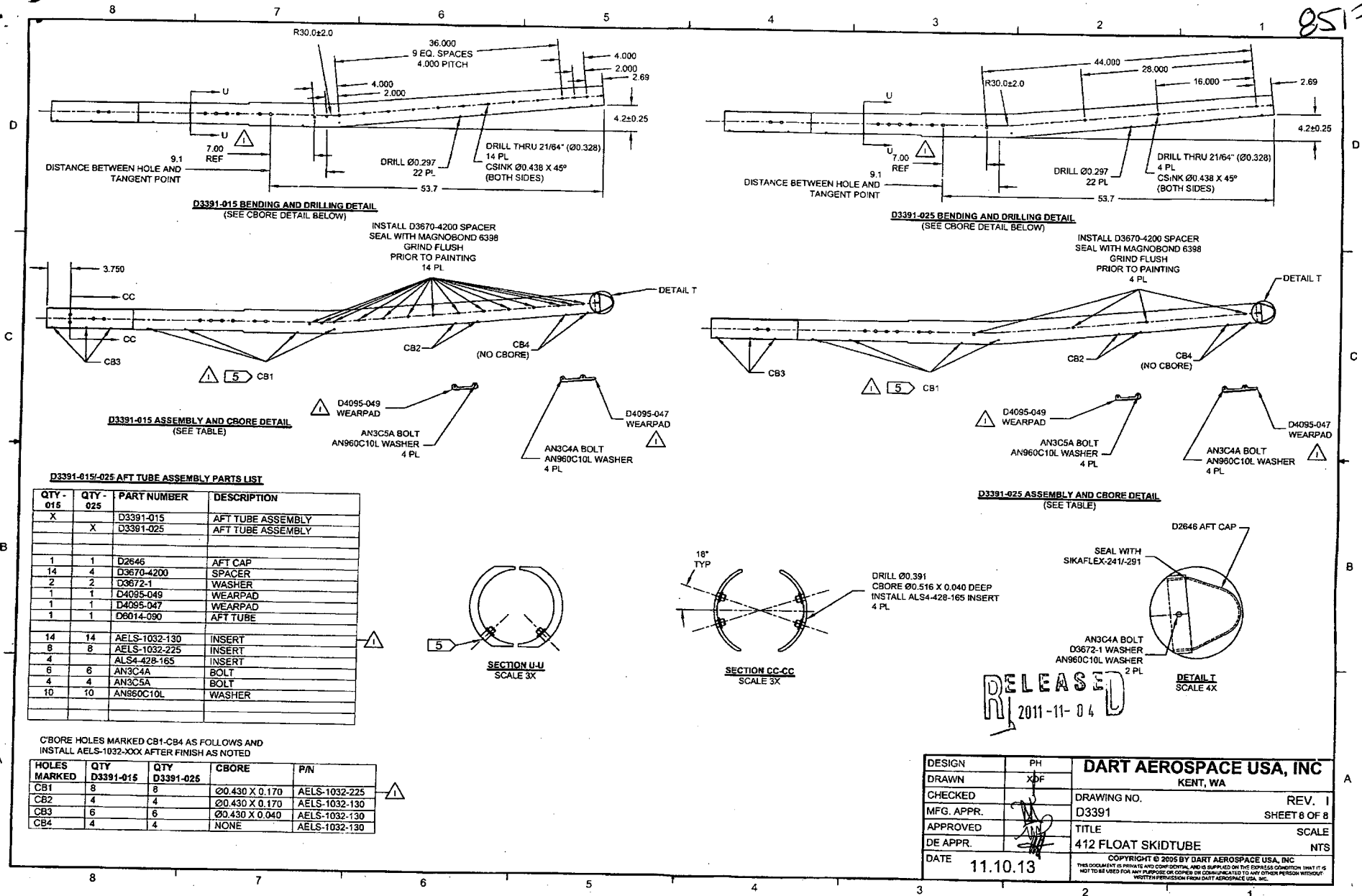
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DATE	11.10.13	

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



NO. 296

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Berclay Elliott  
Job number: 85161  
Part number: A3391-023  
Description: Skid  
Welding Process: Tig[☒] Mig[ ]  
Base materiel: Alum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual:

pass[☒] fail[ ]

Penetration:

pass[☒] fail[ ]

UNACCEPTABLE

Cracks:

pass[☒] fail[ ]

Undercut:

pass[☒] fail[ ]

Pin holes:

pass[☒] fail[ ]

Overlap (cold lap)

pass[☒] fail[ ]

Porosity (surface):

pass[☒] fail[ ]

Coloration:

pass[☒] fail[ ]

Qualifier Berclay Elliott

Date of Test Coupon 12-06-07

Welder Berclay Elliott

Date of Test Coupon 12-06-07

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

